

Products & Sizes

Bar

1.000" - 7.000"

B-16 Alloy Steel Chemical Composition

	Element	Min	Max
C	Carbon	0.42	0.50
Cr	Chromium	0.80	1.15
Mn	Manganese	0.45	0.70
Mo	Molybdenum	0.45	0.65
P	Phosphorus	-	0.025
V	Vanadium	0.25	0.35
S	Sulfur	-	0.025
Al	Aluminum	-	0.015
Si	Silicon	0.20	0.35

Industry Standards

- S6 stress relieving by AOD-ESR melt
- GE-B5F5
- EN 10204
- Hot worked, solution treated (annealed), then descaled

Industry Applications

- Power generation
- Bolting

Physical Properties

- Density: 0.283 lb/in³
- B16 alloy is typically hardened by oil quenching and tempering after the part has reached room temperature
- In diameters over 7", water quenching may be used to meet Charpy impact properties

Mechanical Properties

Hardness

Generally, B16 alloy steel bar is supplied in the quenched and tempered condition where the hardness is normally Rc 35-43. In the annealed condition, hardness is typically 187 BHN.

Machinability

Generally supplied in the quenched and tempered condition, machinability is similar to standard AISI alloys such as 4340.